Digital resources provide limitless opportunities to inspire and engage students. At the same time, school IT managers are challenged with providing fast, reliable network access across an expanding campus footprint while keeping costs and management requirements to a minimum.

Dell EMC has a long history of delivering solutions that are future-ready, flexible and cost-competitive and we bring this same approach into the school networking arena. We offer a common, software-driven platform for wired and wireless connectivity for both traditional and new architectures with customizable solutions for your network.

Schools and school districts come in all shapes and sizes. Does your district have a large IT department looking to scale or consolidate your existing network and deploy flexible new solutions? Do you have a dedicated IT staff managing a multi-site network, and need an easily managed, secure solution that scales with your needs? Or is yours a small organization that requires a cost-effective, secure network with very little troubleshooting or maintenance?

Dell EMC has you covered.

Solution requirements and paths
To meet the demands of today’s and tomorrow’s technologies, schools require K-12 campus networking solutions that provide:

- **Scalability**, with secure, high-speed 1GbE and 10GbE platforms and higher-performing 802.11ac-capable wireless systems
- **Simplicity**, using pretested and validated reference architectures with multi-vendor-capable network management tools and intuitive UIs
- **Flexibility**, including the ability to expand wireless capability in the classroom while reducing costs and preparing for a software-defined networking (SDN)-ready open architecture

Schools have competing paths available to acquire solutions, each with its own trade-offs. Monolithic legacy solutions are expensive to purchase and maintain and may not allow organizations to take advantage of all the latest innovations in the industry. Another potential path, using new proprietary approaches, has inherent lock-in drawbacks and requires the existing environment to be ripped out and replaced when it is time to update. Commodity systems offer a path that is less expensive from an acquisition standpoint but places all deployment on the organization and involves costly ongoing maintenance.

Dell EMC offers a unique path that is designed to deliver maximum value, flexibility and choice as campus networking needs evolve. Key design tenets enable organizations to strike a balance between initial and ongoing costs while lowering total cost of ownership (TCO). These design tenets include a standards-based approach, open architectures and modular systems that let you flexibly scale on demand. The result is a high-performing network that helps enable future-ready schools.

**Universal Service Program for Schools and Libraries (E-rate)**
The E-rate program provides a fantastic opportunity for schools to update their aging networks with the latest wired and wireless technologies.

While E-rate is focused on basic network functionality, Dell EMC offers a range of cost-effective and highly scalable networking solutions that are good, better and best, all of which are made even more affordable with E-rate.
SD-WAN
Dell EMC simplifies and lowers cost with best-in-class SD-WAN technologies. Dell EMC combines industry-leading VMware SD-WAN software with a networking optimized Dell EMC appliance helping customers lower transport costs, provide increased availability and enhanced visibility at the edge.

Wireless
Dell EMC’s K-12 campus networking vision is based on unified management across network tiers, security and wireless, providing a single point of network control. You can upgrade at your own pace, leveraging existing Dell EMC N-Series investments with software upgrades. This architecture merges access and core layers to simplify delivery and management of mission critical wired and wireless applications.

Once you have a solid wired network, it is time to choose a wireless network. The E-rate program provides for basic wireless connectivity within your campus network. Dell EMC solutions for wireless networking can be tailored to the needs and budget of your school. Dell EMC Ruckus wireless delivers reliable, simple, seamless and secure wireless solutions even in most challenging indoor and outdoor environments and powers some of the world’s largest outdoor Wi-Fi deployments serving millions of connected devices.

Right-sized solutions for different sized needs
Dell EMC has designed high-performing unified campus solutions for different requirements, with management solutions for each. All of the solutions are intended to provide energy-efficient operation, compatibility with existing networking equipment and client devices, and wireless choice based on open standards for interoperability.

Delivering important IT and educational benefits
Dell EMC’s unique design philosophy combining open and standards-based systems with modularity and a modern approach gives organizations compelling benefits: investment assurance, scalability on demand and access to the latest innovations. These qualities are the hallmarks of a future-ready approach to IT and networking that can grow with and help transform a district.

Investment assurance
Schools can tailor Dell EMC solutions to their needs today and then adapt them to whatever needs they have in the future, without risking the investment they have already made. For example, you can simplify your transition to software-defined models and reduce risks commonly associated with software-defined deployments by using a variety of Dell EMC SDN solutions.

These solutions have been mutually developed, tested and validated with leading software providers and are fully supported by Dell EMC.

Dell EMC focuses on engineering solutions for the lowest TCO and our investments continue to pay dividends in terms of simplification, time savings and reduced costs over time. These reduced costs help schools get the most benefit from every dollar.

For basic networking with the maximum E-rate funding coverage:
- Dell EMC Networking N3200 series switches for core switching and routing
- Dell EMC Networking N3200/N2200 Power-over-Ethernet Plus (PoE+) switches for end-user access and PoE-powered access points (APs)
- Ruckus wireless networking

Adding redundancy to the core and firewall will ensure more reliable networking in the event of single point failures:
- 2x Dell EMC Networking N3000 switches with multi-chassis link aggregation (MLAG) for core switching and routing
- Dell EMC Networking N2000/N1500 PoE+ switches for end-user access and PoE-powered APs

For the most secure and resilient network, Dell EMC recommends our new unified networking architecture built around the N3200 and N2200 series family:
- Ruckus wireless networking
- Ruckus access points
- Physical, Virtual, Cloud controllers

For the most secure and resilient network, Dell EMC recommends our new unified networking architecture built around the N3200 and N2200 series family:
Scalability on demand
Dell EMC solutions are intended to grow with you so they can scale up, down or out with the same predictable economics and ease. There is no need to overbuy networking at the outset or rip-and-replace when growth occurs.

Access to innovation
With Dell EMC standards-based and open architectures, you have access to the latest innovations wherever they come from; you are not locked into proprietary solutions that may be slower to innovate. Dell EMC focuses on driving out inefficiencies and driving down complexity, so innovations are within reach of every school district, regardless of size. This focus includes offering flexible paths to integrating new in-classroom tools such as interactive whiteboards and student response systems.

Providing key advantages in a changing world
Dell EMC understands the pain points of schools today and works closely with you to help achieve your educational goals.

The Dell EMC portfolio enables you to evolve on your own terms while protecting investments.

The streamlined, integrated Dell EMC switching approach is well-suited to modern, virtual era workloads and applications.

Dell EMC makes networking simple and economical, removing barriers to adopting the capabilities schools need to be successful.

Unified management across network tiers, security and wireless makes networking easier than ever. Dell EMC also offers supply-chain and logistic simplicity with one-stop shopping, from initial consultation and design to financing, installation and lifetime support from a single, reliable source.

Learn more
To learn more about Dell EMC campus networking, contact your Dell EMC representative or visit DellEMC.com/Networking

For more information about E-rate, visit DellEMC.com/erate

IT Lifecycle Services for Networking

Experts, insights and ease
Our highly trained experts, with innovative tools and proven processes, help you transform your IT investments into strategic advantages.

Plan & Design
Let us analyze your multivendor environment and deliver a comprehensive report and action plan to build upon the existing network and improve performance.

Deploy & Integrate
Get new wired or wireless network technology installed and configured with ProDeploy. Reduce costs, save time, and get up and running fast.

Educate
Ensure your staff builds the right skills for long-term success. Get certified on Dell EMC Networking technology and learn how to increase performance and optimize infrastructure.

Manage & Support
Gain access to technical experts and quickly resolve multivendor networking challenges with ProSupport. Spend less time resolving network issues and more time innovating.

Optimize
Maximize performance for dynamic IT environments with Dell EMC Optimize. Benefit from in-depth predictive analysis, remote monitoring and a dedicated systems analyst for your network.

Retire
We can help you resell or retire excess hardware while meeting local regulatory guidelines and acting in an environmentally responsible way.

Learn more at DellEMC.com/Services